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CENTRAL INTELLIGENCE AGENCY

REPORT

50X1-HUM

COUNTRY Rumania

SUBJECT The Nitrogeni Chemical Factory
TarnaveniPLACE
ACQUIREDDATE OF
INFO.

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letter of 16 October 1978 from the
Director of Central Intelligence to the
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SUPPLEMENT TO
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50X1-HUM

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1. The oldest and largest chemical factory in Rumania is the Nitrogeni Plant in Tarnaveni, formerly in the vicinity of Dicio-San-Martin. The plant lies at the western end of Tarnaveni on the railroad line Tarnaveni-Blaj in central Transylvania. The Nitrogeni Plant manufactures chlorine, caustic soda, aluminum, ferro-manganese, ammonia, cement, and earthenware as a by-product. The plant is equipped with modern installations and laboratories in which experimental work, which is directed by the Ministry of Planning in Bucharest, is in progress. Nitrogeni was originally erected as a lime nitrogen factory. The special installations for this process were, however, removed shortly before World War II and replaced with installations for the present production. The plant is the first large installation in Rumania which derives its necessary energy from natural gas.
2. Nitrogeni is equipped with steam-driven turbines which produce 42,000 kilowatts of power. Vertical pipe boilers fired by natural gas produce the necessary steam. Approximately 10,000 to 15,000 kilowatts are not utilized by the plant and are at the disposal of outside users. The boiler installation is cooled by two high cooling towers which provide an excellent point of orientation in the factory area.
3. The natural gas dispensing installation with reducing valves and safety devices is located immediately adjacent to the cooling towers. The gas pipeline is 25 kilometers long and comes from the gas field, which lies to the south of Tarnaveni.
4. The chlorine-alkali installation operates according to the Billiter system with horizontal baths. The installation is old and one third of it is constantly in repair. There is a lack of filter cloths, asbestos, and experienced specialists for the servicing of the installation. It is planned to replace the Billiter system with a modern mercury installation. In this connection, it is sought to again increase the domestic production of quicksilver (presently 3,500 kilos a year). Production methods for mercury are still primitive.
5. The ammonia installation operates according to the Fauser system, which is based on the Haber-Bosch process. All parts of the installation are in excellent condition and replacement parts are sufficient. The daily capacity is theoretically 4,000 kilograms, but in practice is closer to 2,000 kilograms, because of the use of inferior catalysts. After World War II the State planning

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- 2 -

50X1-HUM

authorities became interested in a new system of ammonia synthesis, the details of which are unknown. The ammonia production of Nitrogeni has so far been delivered to the state-owned explosives works in Făgărași

6. During the past war, two carbide furnaces were rebuilt for the manufacture of ferro-manganese. At first, relatively poor Rumanian ores (Jacobeni) were used, and later also Soviet ores. Since the Soviet Union supplies the relatively small Rumanian requirement of ferro-manganese at the present time, this installation works sporadically. Recently the question arose whether to reconvert the furnaces to carbide production. The one carbide furnace which had not been converted was able to supply the country's carbide requirement and even produces in part for export, chiefly to Bulgaria.
7. Nitrogeni has applied a new process for the production of aluminum which was invented by Dyckerhoff-Slaid. By the use of this process it was expected to be able to produce 2,500 tons of aluminum per year, but actual production has remained far lower than this figure. At the present time only aluminum salts useable in industry are manufactured here. During the war IG Farben constructed here an experimental station for the simultaneous production of aluminum and high-grade iron out of Rumanian bauxites, a process based on the use of natural gas according to the Noll-Sturzelberg process. This installation was damaged during the Soviet advance, but the damage was reparable, and the installation plays an important role in the expansion plans of the Rumanian aluminum industry.
8. Aluminum electrolysis at Nitrogeni is calculated at a yearly production of 1,200 tons and operates according to a very sensitive French process which the native workers are able to apply only with great difficulty. There is talk of introducing a completely new process for the extraction of aluminum similar to that for the extraction of electrolytic copper. This process, which reportedly comes from the Soviet Union, is surrounded with much mystery. But the experiments with it can hardly have progressed beyond the laboratory stage, because no changes have so far been noticed in the respective installations of the factory.
9. The daily production of the rotary furnaces is 50 tons of cement clinkers. A rapid-binding cement is also manufactured here.
10. The director of Nitrogeni is the former foreman Niocara who is assisted in technical matters by the engineer Cimoka. 50X1-HUM

Under the

present economic system, the directorship is in practice nothing more than the executive organ of the main office at Bucharest. The leading intelligence in the management of Nitrogeni is the engineer Tescani, formerly called Grunbaum, who is a cement specialist who studied in Germany. 50X1-HUM

It is expected

that he will some day be called into the Ministry of Industry in Bucharest, since he already cultivates continuous connections there. Tescani collaborates on the development of aluminum processes on a country-wide basis.
11. The number of convinced Communists among the workers is estimated at between three and five percent. The number of employees is between 1,600 and 2,000. The factory area is separated from the railroad track by a high wooden fence

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- 3 -



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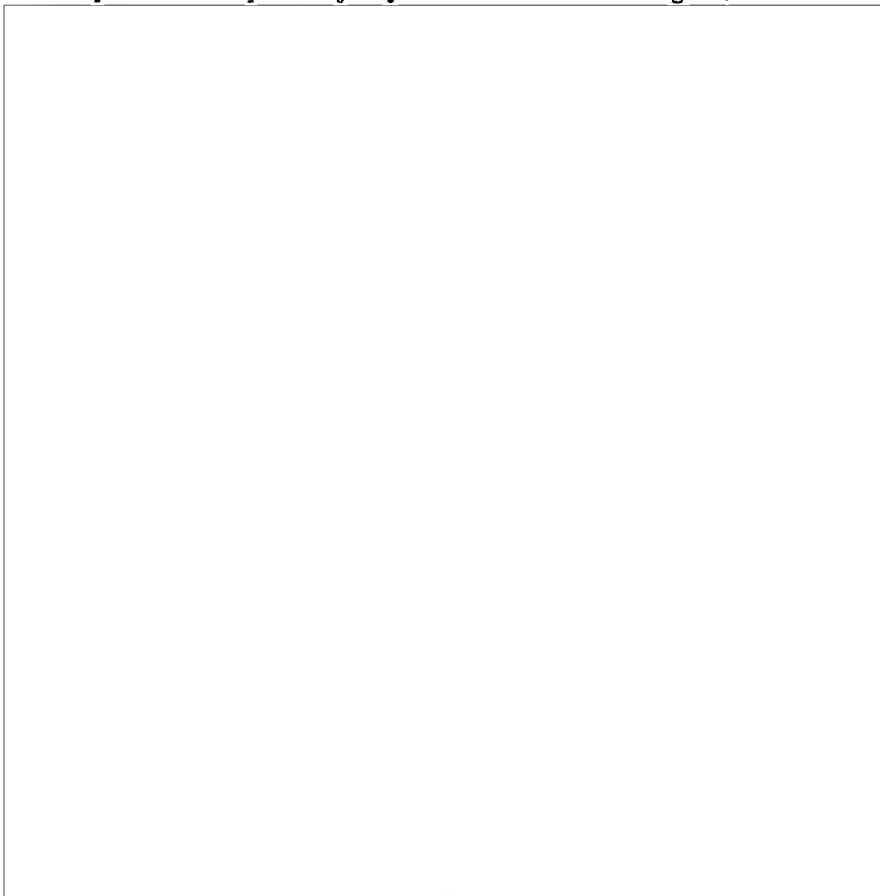
and is protected along its entire circumference by a barbed wire fence. Since the side opposite the wooden fence is bordered by a river, any undetected intrusion would be very difficult in spite of the great extent of the factory area. The main entrance is guarded by factory Militia and a gate keeper. Near the railroad there is a gate which is generally kept locked.

12. Hydrogen for the ammonia synthesis is obtained from gas. In the fall of 1948 Nitrogeni ordered through the since-abolished Office for Chemistry in Bucharest 4,000 kilograms of catalyst for the natural gas plant. The order was placed with an  firm. Whether these 4,000 kilograms of unspecified catalysts represent a full load for the plant or whether they include a reserve is also not known as yet.

50X1-HUM

13. Although its installations cannot at present be fully exploited, Nitrogeni still is the most important chemical factory in the country, being the only concern manufacturing carbide, ferro-manganese and aluminum in Rumania. The Ministry of Economics plans the construction of a new ammonia plant which possibly may be attached to Nitrogeni.

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